

Figure 1

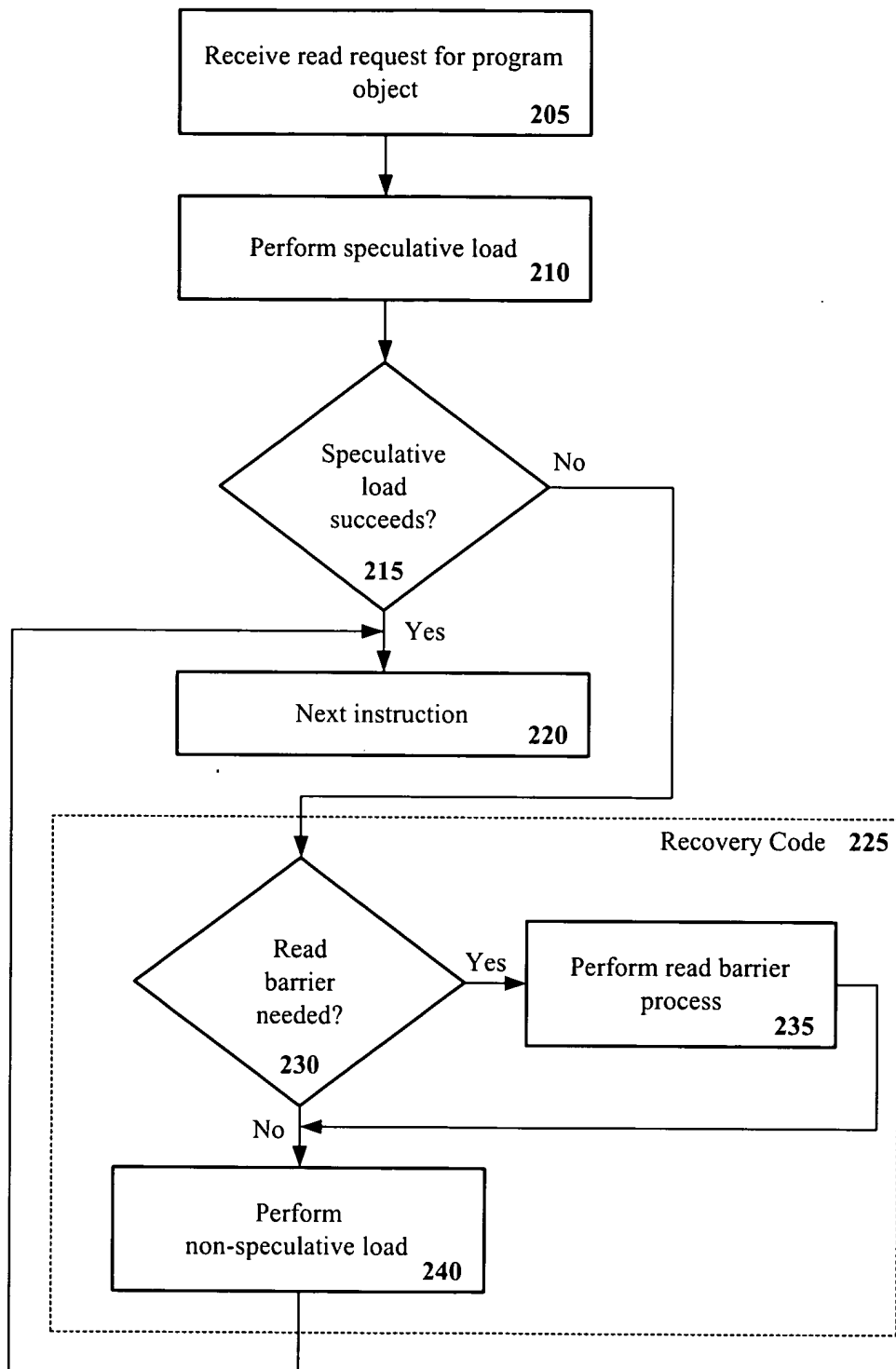


Figure 2

```
305 // load p.x

310 ll:    t = add p, offset(x)
315 l2:    v = ld.s [t]
      ...
320 l3:    chk.s v, RecoveryCode
325 NextInst:
      ...

330 RecoveryCode:
335 l4:    (p1, p2) = tbit.nz t, 0
340 l5:    (p1) t = sub t, 1
345 l6:    (p1) read-barrier(t)
350 l7:    v = ld [t]
355 l8:    br NextInst
```

Figure 3

```
405 // load p.x

410 ll:    t = add p, offset(x)
415 l2:    v = ld.s [t]
      ...

420 l3: chk.s v, RecoveryCode
425 NextInst:
      ...

430 RecoveryCode:
435 l4:    (p1, p2) = cmp.eq t, offset(x)
440 l5:    (p1) br RaiseNullPointerException
445 l6:    (p3, p4) = tbit.nz t, 0
450 l7:    (p3) t = sub t, 1
455 l8:    (p3) read-barrier(t)
460 l9:    v = ld [t]
465 l10:   br NextInst
```

Figure 4

```
505 // load p.x, offset(x) is odd

510 ll:    t = add p, offset(x) - 1
515 l2:    v' = ld2.s [t]
520 l3:    v = shr v', 8
      ...

525 l4:    chk.s v, RecoveryCode
530 NextInst:
      ...

535 RecoveryCode:
540 l5:    (p3, p4) = tbit.nz t, 0
545 l6:    (p3) read-barrier(t)
550 l7:    v = ldl [t]
555 l8:    br NextInst
```

Figure 5

600

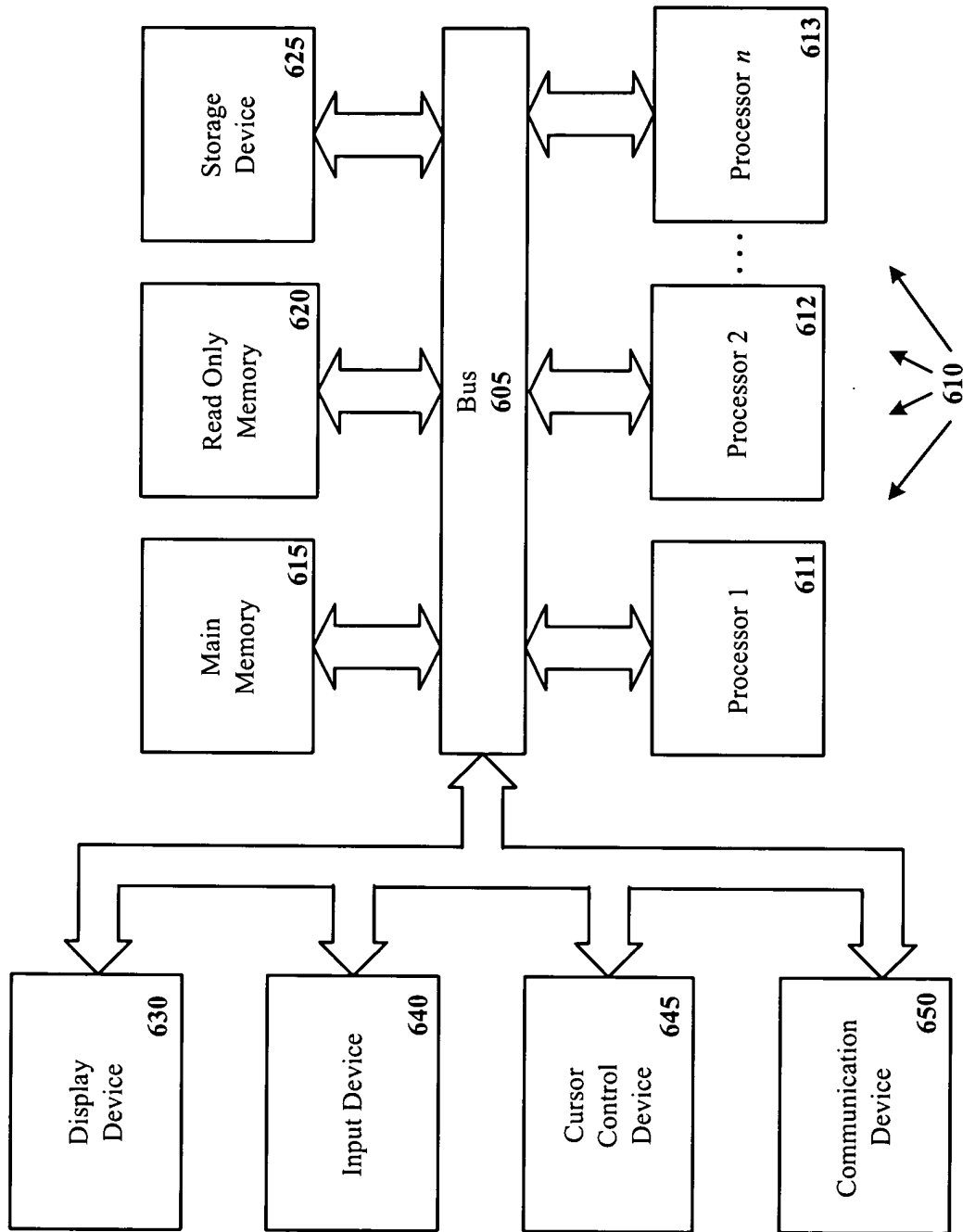


Figure 6